

CLAIMS

What is claimed is:

1. A feedwell for use in a clarifier tank, comprising:
a body defining a volume for flowing a slurry therethrough, the body including a side wall and a floor wherein the floor defines at least one opening therein for discharging the slurry and wherein the at least one opening is configured to constrict flow of the slurry;
at least one baffle disposed within the body in a fixed position relative thereto; and
at least one paddle located and configured to rotate within the body about a central axis of the body.
2. The feedwell of claim 1, wherein the body further comprises a top wall coupled to the side wall.
3. The feedwell of claim 2, wherein the top wall exhibits a substantially frustoconical shape.
4. The feedwell of claim 3, wherein the at least one baffle is fixed to the top wall.
5. The feedwell of claim 4, wherein the at least one paddle is configured for attachment to a drive shaft of a clarifier.
6. The feedwell of claim 5, further comprising at least one scraper located and configured to rotate about the central axis adjacent an interior surface of the floor.
7. The feedwell of claim 5, further comprising at least one scraper located and configured to rotate about the central axis adjacent an interior surface of the side wall.
8. The feedwell of claim 5, wherein the floor includes a first floor section and a second floor section spaced therefrom, the second floor section being disposed radially inwardly of the first floor section, the at least one opening being defined therebetween.

9. The feedwell of claim 1, further comprising at least one other baffle disposed beneath the at least one opening.

10. A feedwell for use in a clarifier tank comprising:
a body defining a volume for flowing a slurry therethrough, the body comprising:
a side wall;
a first floor section extending inwardly from the side wall toward a central axis of the body;
and
a second floor section positioned radially inwardly of the first floor section, the second floor section extending outwardly from a location proximate the central axis of the body, wherein the first floor section and second floor section are configured to define at least one substantially annular opening therebetween.

11. The feedwell of claim 10, wherein the second floor section extends downwardly as it extends outwardly from the location proximate the central axis of the body.

12. The feedwell of claim 11, wherein the first floor section extends downwardly as it extends inwardly from the side wall.

13. The feedwell of claim 10, wherein the at least one substantially annular opening is configured to constrict flow of the slurry therethrough.

14. The feedwell of claim 10, further comprising at least one baffle fixed within the body.

15. The feedwell of claim 14, further comprising at least one paddle located and configured to rotate within the body about the central axis.

16. The feedwell of claim 15, further comprising at least one scraper located and configured to rotate about the central axis adjacent an interior surface of the floor.

17. The feedwell of claim 15, further comprising at least one scraper located and configured to rotate about the central axis adjacent an interior surface of the walled member.

18. The feedwell of claim 10, further comprising at least one baffle disposed beneath the at least one substantially annular opening.

19. A feedwell for use in a clarifier tank comprising:
a body defining a volume for flowing a slurry therethrough, the body including at least a side wall and a floor; and
at least one scraper relatively moveable with respect to the body, the at least one scraper being located and configured to remove an amount of built-up material deposited on an interior surface of the body.

20. The feedwell of claim 19, wherein the at least one scraper is located and configured to remove an amount of built-up material from an interior surface of the side wall.

21. The feedwell of claim 19, wherein the at least one scraper is located and configured to remove an amount of built-up material from an interior surface of the floor.

22. The feedwell of claim 19, further comprising at least one baffle fixed within the body.

23. The feedwell of claim 22, further comprising at least one paddle located and configured to rotate within the body about the central axis.

24. A clarifier comprising:
a tank configured to hold a volume of fluid therein;
a feedwell disposed at least partially within the tank, the feedwell comprising:
a body defining a volume for flowing a slurry therethrough, the body including at least a side wall and a floor coupled to the side wall wherein the floor defines at least one

opening therein for discharging the slurry and wherein the at least one opening is configured to constrict flow of the slurry;
at least one baffle disposed within the body in a fixed position relative thereto;
at least one paddle located and configured to rotate about a central axis of the body; and
at least one scraper located and configured to rotate about a central axis of the body adjacent at least one interior surface of the body.

25. The clarifier of claim 24, further comprising at least one other baffle disposed beneath the at least one opening.